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MORRIS FISHBEIN, M.D.

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is represented by the effort to find a nonvolatile agent for complete narcosis or, failing that, a nonvolatile agent to serve for so-called basal anesthesia, supplemented by the use of a volatile anesthetic. Lendle's paper seems to show that neither Avertin nor the barbital derivative "Pernocton" is a satisfactory solution of the problem. Safe and efficacious new methods of anesthesia may result from the modern work in this field; but all the evidence indicates that the products thus far proposed for so-called basal anesthesia are hypnotics or sedatives and should be used as such. They cannot be safely used for complete anesthesia and can be safely used in combination with other agents for the production of complete anesthesia only by those thoroughly experienced in the administration of anesthetics and closely familiar with the studies of the use of nonvolatile agents for anesthesia. Thus far their intravenous use must be considered unsafe.

PULMONARY ASBESTOSIS

In 1928 THE JOURNAL,[1] commenting on an article by W. E. Cooke,[2] suggested that pulmonary asbestosis, because of its dangers and its unique pathologic features, deserved more attention than had been accorded it. Two and a half years later Mills[3] reported the first case from the United States. His patient had worked in an asbestos mine in South America prior to 1898, had returned to the United States, and again had been employed in South America, this time in an unstated occupation, between 1911 and 1913. He died in Minnesota in 1929. The history of the case indicates that the asbestos which was found in the subject's lungs at necropsy was inhaled prior to 1898. If so, the profound pulmonary changes which evidently were induced by the asbestos, and which seemingly contributed to the patient's death, were present thirty-two years after the agent that caused them was introduced. Even if the exposure to the asbestos occurred at the time of the patient's later visit to South America, the pulmonary injury endured at least seventeen years. Accordingly, Mills has concluded that pulmonary asbestosis is an incurable disease, from which the patient may or may not die. The cause of death, if tuberculosis is avoided, seems to be pulmonary fibrosis with its indirect effect on the heart. At necropsy of Cook's patient, pulmonary fibrosis and evidence of extensive tuberculosis were found; it was not certain whether the fibrosis was due more to the tuberculosis or to the asbestosis. In Mills's case, evidence of tuberculosis was not found but the fibrosis was severe. The conjecture seems warranted, therefore, that asbestos is capable of producing two types of injury, somewhat as iron dust is capable of producing two types of pulmonary siderosis. According to Bohrod,[4] who cited the work of Hart, the red type of iron lung is found in persons who work in iron mines and in factories using certain iron pigments; pneumonoconiotic induration predominates and there is little tuberculosis. Metal grinders and polishers display the black type of iron lung; induration is less evident and tuberculosis is unrestrained. That siderosis and asbestosis are allied seems likely in view of the evidence that the iron-containing[5] portions of asbestos constitute the danger to health in the asbestos industry. Concerning the relation of physicians of the United States to this industry, Mills pointed out that asbestos is mined and manufactured in many parts of this country and that pulmonary asbestosis surely will be encountered. In England the workmen's compensation act has recently been extended to include this condition.[5]

INSENSIBLE PERSPIRATION AND BASAL METABOLISM

The estimation of basal metabolism has proved to be unexpectedly valuable as a diagnostic aid. The measurements of the respiratory exchange, which are now depended on to furnish the requisite information, have been greatly simplified in recent years, so that the procedure can be made applicable even in the office of the individual practitioner. There are, however, refinements of technic that ought to be applied more widely than they usually are. This refers particularly to the proper preparation of the patient and to the maintenance of strictly basal conditions. In the case of infants and children, obvious difficulties present themselves in the measurement of respiratory exchange as well as in direct estimations of heat output. Fortunately an alternative procedure has been proposed in the relatively simple method of ascertaining the insensible losses represented by perspiration. The determination of loss by insensible perspiration as an index of metabolism was discussed in detail in 1926 by Benedict and Root[6] in its application to adults. Its use in relation to children has been championed by S. Z. Levine and his co-workers[7] in the Department of Pediatrics of the Cornell University Medical College, New York. Basal standards of insensible perspiration were proposed by these workers in reference to the normal infant. The latest researches of Levine and Marples[8] have been concerned with the validity of the proposed methods and their basis of reference to predictions. A statistical study was made of the published data responsible for the standards at present available for the basal metabolism and basal insensible perspiration of normal infants. The investigation included consideration of the correlation between the two variables in simultaneous calorimetric measurements as well as in independent measurements with the respiration chamber and the balance. The evidence secured points to a high positive correlation between the physiologic mechanisms of heat production and insensible perspiration in the human subject.

1. Pulmonary Asbestosis, editorial, J. A. M. A. 90:119 (Jan. 14)
2. [illegible] W. E. [illegible] Asbestosis, Brit. M. J. 90:1[illegible] (Dec. [illegible])
3. Mills, R. G.: Pulmonary Asbestosis [illegible] Med. 13:143 (July) 1929.
4. Bohrod, M. G.: [illegible] Siderosis, Arch. Path. 10:179 (Aug.) [illegible]
5. London Letter, J. A. M. A. 94:2078 (June 28) 1930.
6. Benedict, F. G., and Root, H. F.: Insensible Perspiration: Its Relation to Human [illegible] and Physiology, Arch. Int. Med. 38:1 (July) 1926. [illegible] Perspiration and Metabolism, editorial, J. A. M. A. 90:[illegible] (Mar. [illegible])
7. Levine, S. Z., [illegible] and Kelly, Margaret: The Insensible Perspiration in Infancy [illegible] Its Constancy in Infants [illegible] Relation to Surface Area, Am. J. Dis. Child. 40:[illegible] (Aug.) 1930; The Insensible Perspiration in Infancy [illegible] Effects of Various Physiologic Factors [illegible] Standard [illegible] Am. J. Dis. Child. 40:[illegible] (Sept.) 1930; The Insensible Perspiration in Infancy [illegible] Its Relation to Surface Area and of Correlation, Am. J. Dis. Child. 40:[illegible] (Oct.) 1930.
8. [illegible]

Foreign Letters

LONDON

(From Our Regular Correspondent)

May 31, 1930.

Use of the Thomas Splint in Peace Time

One of the discoveries in the war was the value of the Thomas splint for the treatment of fractures of the femur. In the early days the mortality from compound fractures of the femur was in the neighborhood of 82 per cent. The introduction of the Thomas splint as a first aid measure reduced the mortality to 12 per cent. In a letter to the *Times* a surgeon, Mr. T. E. A. Stowell, points out that this lesson, taught fourteen years ago, has not yet been learned. This was demonstrated by an automobile accident at crossroads recently. Two persons suffering from compound fractures of the femur lay at the roadside and were being attended by uniformed members of an ambulance organization. The ambulance men were intelligent and doing their best, but their services were inadequate because there is no official ambulance training in the use of the Thomas splint. Mr. Stowell makes a plea that every roadside aid post and every ambulance shall be equipped with the simple apparatus which we owe to that surgical genius, H. O. Thomas, and that all ambulance workers shall be trained in its use as a first aid measure.

Compensation Act to Be Extended to Asbestosis

The workmen's compensation act applies to all diseases due to exposure to silica dust, but it has been ascertained recently that the dust of asbestos, which is a silicate, produces similar effects. Hence a bill has been introduced into parliament extending the silicosis provisions of the workmen's compensation act to processes involving exposure to asbestos. Supporting the bill, Lord Russell for the government said that many processes in silica working could not show a mortality approaching that for the asbestos industry, in which 14 fatal cases had now been reported and in addition 3 deaths from asbestosis associated with tuberculosis. In 8 of the 17 fatal cases the disablement before death varied from six months to several years and in 4 cases from a few days to a few weeks. The incidence rate of this disease was 1 in 8 among those actually employed and at work, or, if those employed less than five years were excluded, the incidence rate was 1 in 3. While the fibrosis associated with silicosis was in more or less isolated nodules, asbestos fibrosis was a fine cobweb ultimately permeating the greater portion of the lungs and leaving little sound tissue. A special scheme of medical inspection by experts will be set up. It is thus hoped that cases which previously would have been certified as tuberculosis or pneumonia or other disease of the lungs will now be certified as due to asbestos fibrosis. The disease hardly becomes definite before five years' work in the industry, and if it is detected early and the man removed from it compensation will not be necessary.

The Danger from Fatigued Automobile Drivers

The standing committee of the house of commons, which is considering the road traffic bill, has discussed the clause which limits the time during which public service and other heavy motor vehicles can be on duty continuously. There is a clause which provides that drivers of such vehicles must not be on duty continuously for a period exceeding five and one-half hours. Mr. Morrison, minister of transport, said that it had been found necessary to insert this clause to meet a serious state of affairs. Cases had come to the notice of the minister of transport in which there was reason to believe that accidents had been caused by the fatigue of drivers owing to long hours of continuous work. Mr. Llewellyn Jones said that his experience in conducting inquiries into fatal accidents had been to the effect that automobile drivers had often, especially of late years, been driving, owing to the long hours during which they had been on duty. The clause was agreed to, but an amendment exempting automobiles used for fire brigade or ambulance purposes was accepted by the government.

Another Opportunity for Women Physicians

Under the new local government act, all the municipal hospitals of London have now been taken from under the control of local bodies and put under the London county council. The public health committee of this body has decided that all the numerous appointments to the hospitals and district medical services shall be open to women as well as to men physicians. This decision means that women will be eligible to rise to the highest grades in the service and may become superintendents of hospitals. For the first time, they will not be subject to restrictions.

International Veterinary Congress

An international veterinary congress will be held in London, August 4-9. Official delegates have been appointed by Canada, New Zealand, South Africa, South Australia, Irish Free State, Albania, Austria, Belgium, China, Denmark, Ecuador, Germany, Greece, Guatemala, Holland, Nicaragua, Roumania, Sweden, Turkey and Yugoslavia. The government has granted free visas to all foreign delegates, who are expected to number more than a thousand. The congress will be the eleventh of its kind, the first having been held in Hamburg in 1863 immediately after the great European outbreak of cattle plague. The problems to be discussed include foot-and-mouth disease, infectious abortion, tuberculosis, and the control of meat and milk production and distribution. Besides these subjects, to which general meetings will be held, there will be sectional meetings for the discussion of rabies, poultry disease and deficiency disease. The corporation of the city of London will give a reception to all delegates and the government will give a banquet.

Employment for the Tuberculous

The employment committee of the joint tuberculosis council, which consists of seven physicians, has issued an important report on care and after-care in tuberculosis. It finds that the most difficult problem and at the same time the most urgent one awaiting solution in the after-care of the tuberculous is employment. The primary object of all schemes should be to increase the percentage of cases likely to be reabsorbed into ordinary industry rather than to embark on ambitious schemes for the permanent employment of the disabled. There are many tasks under modern industrial conditions which the consumptive can perform if the disease is in a state of quiescence, and there is no task for which he is better equipped than that to which he has devoted the greater part of his life. No consumptive realizes this better than the physician who falls a prey to tuberculosis. He takes the common sense course and attaches himself to the staff of a sanatorium. There appears to be little hope economically for the consumptive unless he is able to resume his previous occupation and be employed on his own merits. A further point which eliminates him from the ordinary industrial market is that the great majority of trading concerns demand either a high degree of intellectual capacity at some particular job or a high standard of physical fitness. With regard to village settlements, the committee finds that the results are excellent. Even the advanced case is able to weather the storm of life for a much longer period under settlement conditions than he would in the outside world. But so-called employment schemes as at present administered, handicraft classes, vocational therapy centres, training colonies and village settlements can give permanent employment only to an insignificant number in comparison with the magnitude of the problem.